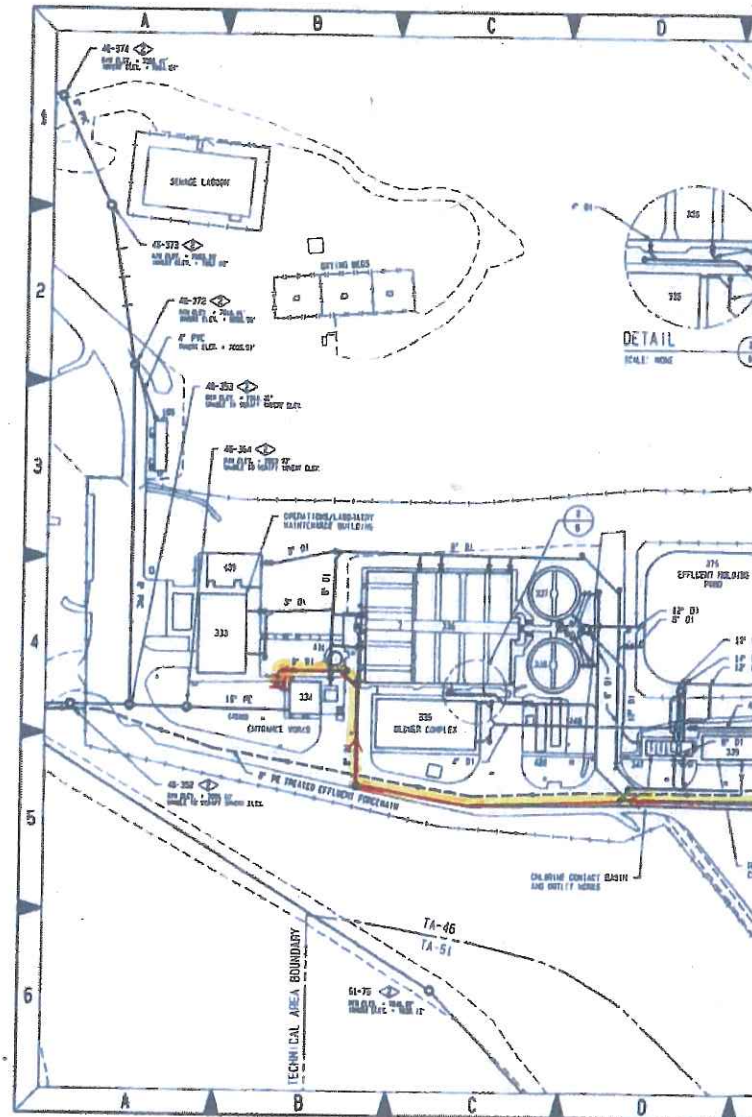
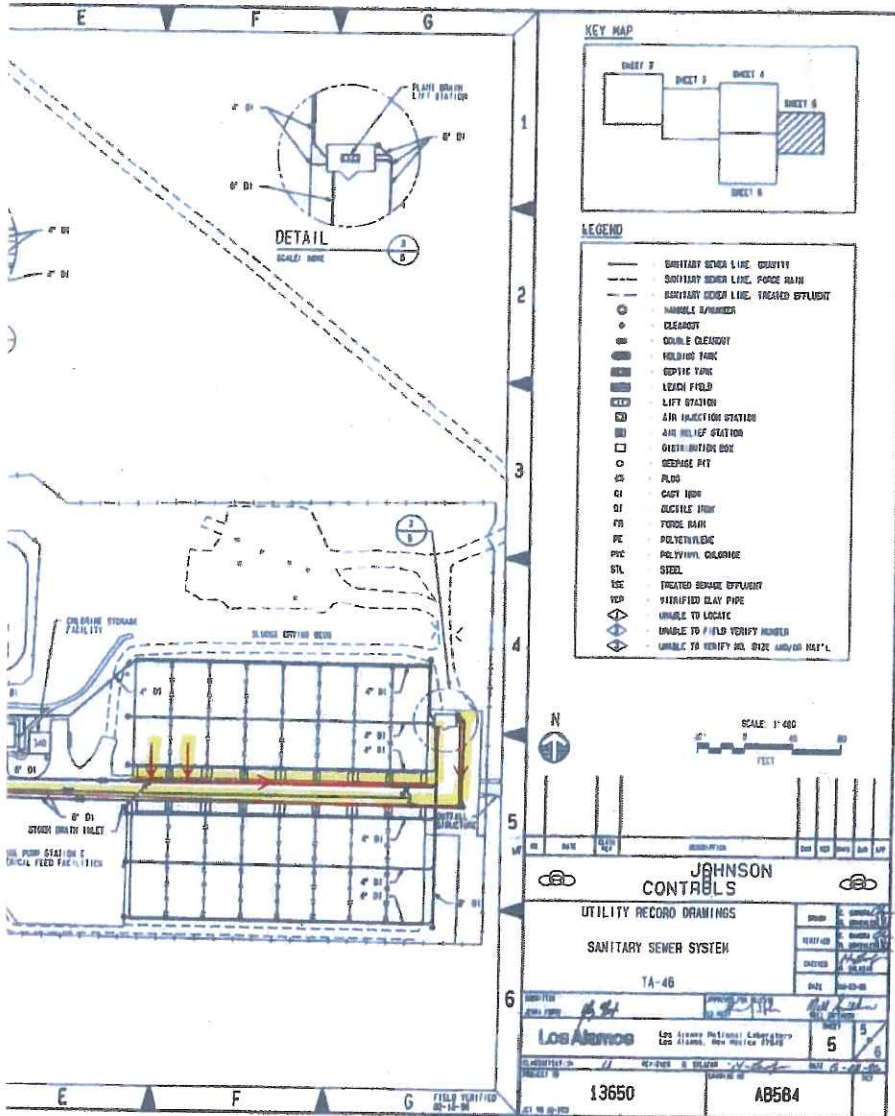


Attachment 4 - SWWS Sludge Drying Beds Return Water System →





ENCLOSURE 6

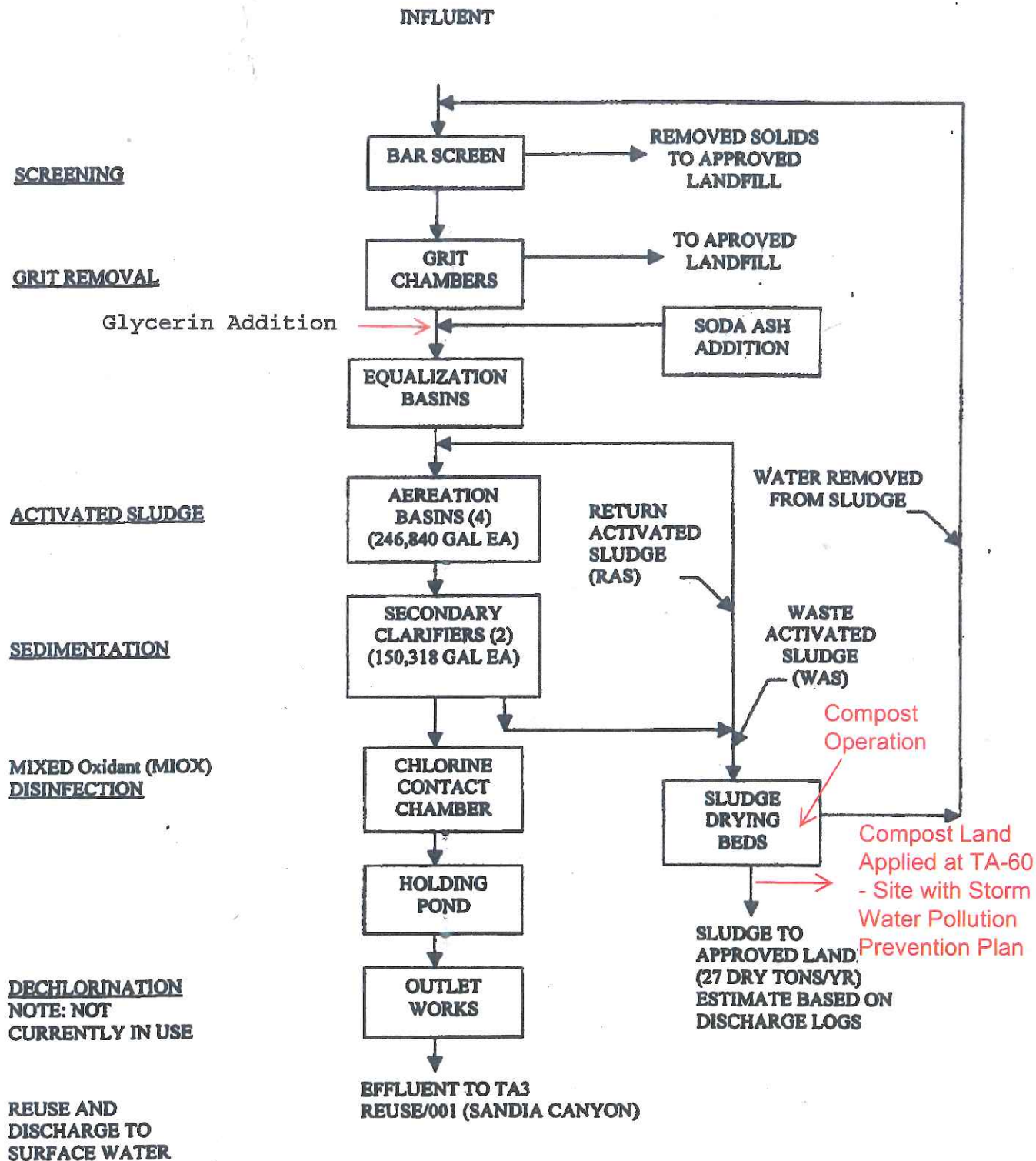
SWWS Process Schematic

ENV-RCRA-12-0137

LAUR-12-22119

Date: AUG 15 2012

**SANITARY WASTEWATER SYSTEMS (SWWS) PLANT
TA-46 BUILDING 333 (ADMIN. /CONTROL ROOM/LAB)
OUTFALL #13S**



ENCLOSURE 7

NOI to NMED GWQB

ENV-RCRA-12-0137

LAUR-12-22119

Date: AUG 15 2012



1. Name and mailing address of person proposing to discharge:

John D. Naranjo, Operations Manager

Work Phone: (505) 665-7884

Sanitary Waste Water System (SWWS) Composting Facility

Cell/Home Phone (505) 231-0513

Los Alamos National Laboratory

Fax: (505)667-7746

PO Box 1663; Mail Stop J972 – Los Alamos, NM 87545

Email: john@lanl.gov

2. Name of facility:

Sanitary Waste Water System (SWWS) Composting Operation

3. Physical location of discharge (if applicable, give street address, township, range, section, distance from closest town or landmark, directions to facility, location map):

The SWWS is located at Los Alamos National Laboratory in Technical Area 46. Latitude - 35° 51' 08"N and Longitude – 106° 16' 29"W – See Enclosure 4 and 5.

4. Type of operation generating the discharge (e.g., truck wash, food processing plant, restaurant, etc.):

Through a conventional waste water treatment process, the SWWS facility treats sanitary waste water, process water, cooling water, storm water, and waste water discharged to the sanitary sewer and/or collected in storage tanks from all technical areas at the Laboratory. All waste water discharged to the SWWS Plant must comply with the facility's Waste Acceptance Criteria. The facility's effluent discharge is permitted under NPDES # NM0028355 and DP-857. Waste sludge from the SWWS is mixed with a polymer, and discharged to the sludge drying beds. Decanted water from the digester and/or sludge drying beds is recycled to the head works for treatment. Enclosures 6, 7 and 8 provide a description of the process. The SWWS Facility will use the Static Aerated Pile composting method to produce an "exceptional quality"(EQ) biosolid or EQ composted soil amendment. Only EQ soil amendments will be land applied at LANL (see question #5). EQ soil amendments meet the 40 CFR Part 503 pollutant concentration limits (Table 3 of Section 503.13) as well as Class A pathogen reduction requirements and one of the first eight vector attraction reduction options listed in 503.33(b)(1) through (b)(8).

5. Source(s) of the discharge. Describe how the wastewater, sludge, or other discharges processed and/or disposed at your facility are generated. Identify all sources. Attach additional pages if needed:

Composting will take place on two of the sludge drying beds (see Enclosure #6). In the static pile design, composting feed stocks and bulking materials will be placed under and over the sludge to facilitate aeration and provide added levels of odor and vector controls. Compost operations conducted over the drying beds will provide a closed system for liquids and further facilitate a safe and sanitary operation. Decanted water from the digester and/or sludge drying beds is recycled to the head works for treatment. Waters generated from the composting operation will be returned to the head works of the treatment plant. See Enclosure 7 and 8.

No discharge to ground water will occur from the composting dewatering operation. The final soil amendment will be land applied on Laboratory property at the TA-60 Sigma Mesa Staging Area. The



Staging Area is subject to the conditions of the TA-60 Roads and Ground Facility Multi-Sector General Permit (MSGP) - #NMR05GB21 - Storm Water Pollution Prevention Plan (SWPPP). An amendment to the SWPPP will include the addition of a 2.5-acre site consisting of shrub oak and dense grassland vegetation. The site is ideally suited for land application for beneficial use of the final soil amendment. (see Enclosure 2). The soil amendment will be applied to a 3" thickness. Located on a mesa top, the topography is generally flat and includes a number of natural swales. Depth to ground water is >1000 ft. The receiving water is Sandia Canyon. In addition to the natural controls, berms will be constructed to ensure soil amendments are not transported to water courses. Coverage of this site under the SWPPP ensures that a documented, implementable process is in place to reduce the possibility that compost materials will reach a water course. The compost application site will be subject to periodic inspections and corrective actions as specified in the SWPPP.

6. Expected contaminants in the discharge (e.g., nitrate-nitrogen, metals, organic compounds, salts, etc.) Include estimated concentration if known, and copies of results of laboratory analyses, if available:

No discharge to ground water will occur from the composting dewatering operation. The return stream (to head works) from the dewatering process contains ammonia, nitrates, chloride, organic compounds, phosphorus, methane, hydrogen sulfide, microorganisms. The final composted soil amendment will be land applied as specified above. The composted soil amendment will meet 40 CFR Part 503 requirements for land application: the pollutant concentrations for high quality sewage sludge in 503.13(b)(3), the more stringent Class A pathogen requirements in 503.32(a), and one of vector attraction reduction requirements in 503.33(b)(1) through 503.33(b)(8).

7. Describe all components of wastewater processing, treatment, storage, and disposal system (e.g., grease interceptor, lagoon, septic tank/leachfield, etc.) Include sizes, site layout map, plans and specifications, etc. if available:

Wastewater is received at the SWWS from a sanitary wastewater collection system and is routed through (see attached process schematic) a bar screen » grit chamber » splitter box » equalization basins » aeration basins » secondary clarifiers » chlorine contact chamber. The sludge generated is discharged to drying beds. See Enclosure 6, 7 and 8. Composting will take place on two of the sludge drying beds (see Enclosure #6). Waters generated from the composting operation will be returned to the head works of the treatment plant.

8. Estimated depth to ground water (ft):

1000' to 1300' (Regional) – 2010 Ground Water Level Status Report

Signature: _____

Date: _____

Printed name: Andrew W. Erickson

Title: Facility Operations Director
Utilities and Institutional Facilities

Please return this form to:

NMED Ground Water Quality Bureau
P.O. Box 5469
Santa Fe, New Mexico 87502-5469

Telephone: 505-827-2900
Fax: 505-827-2985

ENCLOSURE 8

TA-60 Roads and Grounds Facility MSGP SWPPP Map & Compost
Application Site

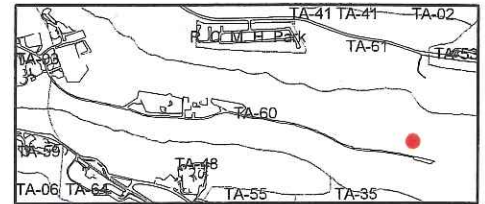
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Date: AUG 15 2012

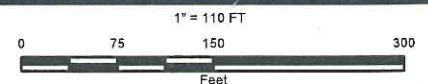
LAUR 12-22119
**ROADS AND GROUNDS
 OPERATIONAL SWPPP
 SIGMA MESA
 STAGING AREA**

TA-60



LEGEND

	DRAINAGE PATTERN
	DIRECTION OF FLOW
	PRS
	VEHICLE STORAGE
	ROCK CHECK DAM
	CONSTRUCTION MATERIAL PILE
	SAMPLER
	SHED
	DISCHARGE PTS.
	RUN ON POINT
	EQUIPMENT STORAGE
	EARTHEN BERM
	SIGMA MESA STAGING AREA BOUNDARY
	PAVED AREAS
	DIRT ROADS
	DITCH
	SPILL
	FENCE
	20 FT CONTOURS
	GRAVEL
	PROPOSED BERM



U07001 Rev.1

Classification: U Reviewer: H. Salazar Date: 16-JUL-2012



SANDIA CANYON



POTENTIAL RELEASE SITES (PRS) SOURCE STATEMENT:
Los Alamos National Laboratory, Waste & Environmental Services Division,
GIS/Geotechnical Services Group, EP2008-0224; 1:2,500 Scale Data; 30 May 2008.

MORTANDA